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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,998	01/27/2006	Reiner Hammerich	09700.0116-00	6380
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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HOANG, SON T	
			ART UNIT 2169	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,998

Applicant(s)

HAMMERICH, REINER

Examiner

Son T. Hoang

Art Unit

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21, 24 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 21 March 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. The instant application having Application No. 10/527,998 has a total of 24 claims pending in the application; there are 6 independent claims and 18 dependent claims.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. **Claims 1-21 and 24** are drawn adding metadata to a basic data type, classified in class 707, subclass 102.
- II. **Claims 22-23** are drawn to generating an application program and defining how the application program can access metadata through runtime, classified in class 707, subclass 104.1.

The inventions are distinct, each from the other because of the following reasons:

Inventions in *Groups I* and *II* are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention in *Group I* has separate utility such as using the application to access and add metadata to a data type. See MPEP § 806.05(d). Invention in *Group II* has separate utility such as designing and defining the application program to access metadata.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purpose as indicated is proper.

The Applicant has selected *Group I* consisting of **claims 1-21 and 24** after the telephonic communication made on July 24, 2007. The Examiner hereon only considers **claims 1-21 and 24** for examination purposes.

Oath/Declaration

3. The Applicant's oath/declaration has been reviewed by the Examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

Information Disclosure Statement

4. As required by **M.P.E.P. 609(C)**, the Applicant's submission of the Information Disclosure Statement dated March 21, 2005 is acknowledged by the Examiner and the cited references have been considered in the examination of the claims now pending. As required by **M.P.E.P 609 C(2)**, a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

Priority

5. The Applicant's claim for foreign priority of European Patent Application No. EP 02021572.9 is confirmed. The Examiner takes the foreign filing date of September 26, 2002 into consideration.

Abstract

6. The abstract of the disclosure is objected due to the use of implied language. Note that in the abstract, the language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc... See MPEP § 608.01(b). Correction is required.

Drawings

7. The drawings were received on March 21, 2005. These drawings are acceptable for the examination purposes.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 5-10; 11; 15-21** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claims 5, 11, 15, 16, 20, 21** the claims use the phrase "**anyone of the claims**". Accordingly, the term "**anyone**" is an improper use of multiple dependent claims. See MPEP § 608.01(n). The Examiner suggests using "**any one of the claims**" instead.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate Paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this Section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the Applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the Applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. **Claims 1-3, 5-8; 11; 12-14, 16-19; 24;** are rejected under 35 U.S.C. 102(e) as being anticipated by Kesler (Pat. No. US 7,062,502, filed on December 28, 2001).

Regarding **claim 1**, Kesler clearly shows and discloses a method (400) for dynamic data type enrichment (*Abstract*) comprising the steps:

using (410) at least one basic data type (110) in a predefined application program (210) (*The MaskedTextBox is designed to provide an input mask for text fields that store formatted data such as social security numbers, [Column 35, Line 59 → Column 36, Line 5], see also CheckBox, ComboBoxControl, DateTimeControl, NumericFormatBox in [Column 34, Line 56 → Column 36, Line 23] for further illustrations*); and

adding (420) metadata (150) to the at least one basic data type (110) at runtime when the application program (210) is executed (*The Mask Type attribute defines the type of mask to be used. A few predefined masks are available such as PHONE_MASK and SSN_MASK. The GENERAL_MASK Mask Type is used in combination with the Format entity field attribute to define custom input masks using a set of special characters. For example, setting the Format attribute to "A###" generates an input mask that ensures the first character must be alphanumeric and the last three characters must be digits. The SSN filed in the Employee entity uses the SSN_MASK Mask Type as illustrated in Fig. 51, [Column 35, Line 59 → Column 36, Line 5]*).

Regarding **claim 2**, Kesler further discloses a method, wherein the application program (210) uses an application programming interface (190) for

accessing (415) the metadata (150) before adding (420) (*Figure 58 shows Configuration Repository file where all the metadata are configured*).

Regarding **claim 3**, Kesler further discloses a method, wherein the application program (210) calls through the application programming interface (190) at least one metadata service (191) that relates to the basic data type (110) (*The mapping process as described in explanations of claim 1. Accordingly, when Social Security Number field is identified, the application program will go back to the repository to relate the appropriate metadata for that particular data type. From the metadata, a particular format of Social Security Number will be applied so the users would know when they entered the wrong format as illustrated in Figure 51*).

Regarding **claim 5**, Kesler further discloses a method, wherein the basic data type (110) is defined in a programming language used by the application program (210) (*Social Security Number is a sequence of integers used by any known programming language*).

Regarding **claim 6**, Kesler further discloses a method, wherein the metadata (150) is associated with a specific data type (120) defined in a metadata store (210) (*Information gleaned from the schema is used to populate a configuration repository with metadata. This metadata is then utilized by the user interface to generate data entry forms, [Column 8, Lines 1-12]*).

Regarding **claim 7**, Kesler further discloses a method, wherein the application program (210) provides a mapping (302) between the specific data type (120) and the basic data type (110) (*The mapping process as described in explanations of claim 1. Accordingly, when Social Security Number field is identified, the application program will go back to the repository to relate the appropriate metadata for that particular data type. From the metadata, a particular format of Social Security Number will be applied so the users would know when they entered the wrong format as illustrated in Figure 51, see also [Column 38, Line 66 → Column 39, Line 4] for further illustrations).*

Regarding **claim 8**, Kesler further discloses a method, wherein the application program uses a variable (201) to map (302) the specific data type (120) to the basic data type (110) (*The mapping process as described in explanations of claim 1. Accordingly, when Social Security Number field is identified, the application program will go back to the repository to relate the appropriate metadata for that particular data type. From the metadata, a particular format of Social Security Number will be applied so the users would know when they entered the wrong format as illustrated in Figure 51, see also [Column 38, Line 66 → Column 39, Line 4] for further illustrations).*

Regarding **claim 11**, Kesler clearly shows and discloses a computer program product comprising instructions that when loaded into a memory of a computer system (900) cause at least one processor of the computer system (900) to execute the steps of any one of the claims 1 to 10 (*Computer software*

for, apparatus for, and a method of automatically extracting schema information and generating corresponding schema and user interface metadata; storing the metadata in a repository and automatically developing from the metadata a user interface appropriate to the relational database, [Column 2, Line 49 → Column 4 Line 7]) .

Regarding **claim 12**, Kesler clearly shows and discloses a computer system (900) ([Column 2, Line 49 → Column 5, Line 7]) comprising:

a memory ([Column 2, Line 49 → Column 5, Line 7]) storing an application program (210) that uses a basic data type (110) (*The MaskedTextBox is designed to provide an input mask for text fields that store formatted data such as social security numbers, [Column 35, Line 59 → Column 36, Line 5]*); and

a processor ([Column 2, Line 49 → Column 5, Line 7]) executing instructions to add metadata (150) to the basic data type (110) when executing the application program (210) (*The Mask Type attribute defines the type of mask to be used. A few predefined masks are available such as PHONE_MASK and SSN_MASK. The GENERAL_MASK Mask Type is used in combination with the Format entity field attribute to define custom input masks using a set of special characters. For example, setting the Format attribute to "A###" generates an input mask that ensures the first character must be alphanumeric and the last three characters must be*

digits. The SSN filed in the Employee entity uses the SSN_MASK Mask Type as illustrated in Fig. 51, [Column 35, Line 59 → Column 36, Line 5]].

Regarding **claim 13**, Kesler further discloses a computer system (900) further comprising an application programming interface (190) to access (415) the metadata (150) from the application program (210) (*Figure 58 shows Configuration Repository file where all the metadata are configured*).

Regarding **claim 14**, Kesler further discloses a computer system (900), wherein the application programming interface (190) provides at least one metadata service (191) that relates to the basic data type (110) used by the application program (210) (*The mapping process as described in explanations of claim 1. Accordingly, when Social Security Number field is identified, the application program will go back to the repository to relate the appropriate metadata for that particular data type. From the metadata, a particular format of Social Security Number will be applied so the users would know when they entered the wrong format as illustrated in Figure 51*).

Regarding **claim 16**, Kesler further discloses a computer system (900), wherein the basic data type (110) is defined in a programming language used by the application program (210) (*Social Security Number is a sequence of integers used by any known programming language*).

Regarding **claim 17**, Kesler further discloses a computer system (900), wherein the metadata (150) are associated with a specific data type (120)

defined in a metadata store (210) (*Information gleaned from the schema is used to populate a configuration repository with metadata. This metadata is then utilized by the user interface to generate data entry forms, [Column 8, Lines 1-12]).*

Regarding **claim 18**, Kesler further discloses a computer system (900), wherein the application program (210) provides a mapping (302) between the specific data type (120) and the basic data type (110) (*The mapping process as described in explanations of claim 1. Accordingly, when Social Security Number field is identified, the application program will go back to the repository to relate the appropriate metadata for that particular data type. From the metadata, a particular format of Social Security Number will be applied so the users would know when they entered the wrong format as illustrated in Figure 51, see also [Column 38, Line 66 → Column 39, Line 4] for further illustrations).*

Regarding **claim 19**, Kesler further discloses a computer system (900), wherein the application program uses a variable (201) to map (302) the specific data type (120) to the basic data type (110) (*The mapping process as described in explanations of claim 1. Accordingly, when Social Security Number field is identified, the application program will go back to the repository to relate the appropriate metadata for that particular data type. From the metadata, a particular format of Social Security Number will be applied so the users would know when they entered the wrong format as illustrated in Figure 51, see also [Column 38, Line 66 → Column 39, Line 4] for further illustrations).*

Regarding **claim 24**, Kesler clearly shows and discloses a method for changing metadata (150) (*Abstract*) comprising the steps:

executing an application program (210) that uses at least one metadata service (191) to access the metadata (150) in a metadata store (220) (*Data entry and navigation functionality in the UI are provided through "pop-up" menus. These menus are generated dynamically from metadata stored in the configuration repository. The metadata associated with menus is "pre-defined" in the sense that it is not derived from the database schema but instead built in to the UI architecture, [Column 12, Lines 20-36]*);

changing the metadata (150) in the metadata store (220) at runtime of the application program (210) (*When add or remove a field, the metadata relating to an entity's collection of fields is simply modified within the Utility Tool to reflect the change. The data entry form will automatically adjust to changes in metadata without the necessity of writing any computer code, [Column 17, Lines 19-25]*); and

using the at least one metadata service (191) in the application program (210) for using the changed metadata without restarting the application program (210) (*Scripting is stored as metadata in the configuration repository, and does not require recompilation and*

redeployment of the UI software when changes are made, [Column 33, Lines 28-43]].

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 4, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kesler (Pat. No. US 7,062,502, filed on December 28, 2001) in view of Koseki et al. (Pat. No. US 6,732,124, filed on February 9, 2000, hereinafter Koseki).

Regarding **claim 4, and 15** Kesler does not explicitly disclose a metadata service copies the metadata to a metadata cache.

Koseki discloses a metadata cache is provided as part of the computer's main memory to hold a copy of metadata objects from the metadata volume. A metadata loading unit reads out a specific metadata object from the metadata volume to the metadata cache when a transaction demands it ([Column 9, Lines 48-58]).

It would be obvious to a person skilled in the art at the time of the invention to incorporate the teachings of Koseki with the teachings of Kesler for the purpose of modifying the copy of metadata in the metadata cache instead of

directly manipulating the original in the metadata volume ([Column 9, Lines 55-58] of Koseki).

14. **Claims 9-10, 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kesler (Pat. No. US 7,062,502, filed on December 28, 2001) in view of Logan et al. (Pub. No. US 2003/0093790, filed on June 8, 2002, hereinafter Logan).

Regarding **claims 9-10, 20-21** Kesler does not explicitly disclose the metadata is stored in private and/or public instance of the metadata store.

Logan discloses that metadata contributed by other users and stored in a public database as well as private database. The metadata stored may be created, edited and deleted using a Web server or other server operates to contribute to the metadata ([0308]).

It would be obvious to a person skilled in the art at the time of the invention to incorporate the teachings of Logan with the teachings of Kesler for the purpose of permitting the public to contribute to the metadata as well as providing the ability for employees of the metadata service to create and modify the stored metadata ([0308] of Logan).

Conclusion

15. These following prior arts made of record and not relied upon are considered pertinent to Applicant's disclosure:

Rawat et al. (Pat. No. US 6,662,340) teaches client-side form filler that populates form fields based on analyzing visible field labels and visible display format hints without previous examination or mapping of the form.

Vosburgh (Pub. No. US 2004/0205552) teaches method and system for mapping between markup language document and an object model.

Bosworth et al. (Pat. No. US 6,738,968) teaches unified data type system and method.

Kanai et al. (Pat. No. US 7,072,983) teaches scheme for systemically registering meta-data with respect to various types of data.

The examiner requests, in response to this Office action, support(s) must be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line no(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application.


When responding to this office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

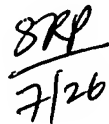
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Hoang whose telephone number is (571) 270-1752. The Examiner can normally be reached on Monday - Friday (7:30 AM – 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ali can be reached on (571) 272-4105. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MOHAMMAD ALI
PRIMARY EXAMINER


SRP
7/26

/S.H./

Son T. Hoang
Examiner

July 26, 2007